Claims

What is claimed is:

1. A method in a data processing system for statically initializing an array, comprising the steps of:

compiling source code containing the array with static values to generate a class file with a clinit method containing byte codes to statically initialize the array to the static values;

receiving the class file into a preloader;

play executing the byte codes of the clinit method against a memory to identify the static initialization of the array by the preloader;

storing into an output file an instruction requesting the static initialization of the array; and

interpreting the instruction by a virtual machine to perform the static initialization of the array.

2. The method of claim 1 wherein the storing step includes step of:

storing a constant pool entry into the constant pool.

3. The method of claim 1 wherein the play executing step includes the steps of:

allocating a stack;

reading a byte code from the clinit method that manipulates the stack; and

performing the stack manipulation on the allocated stack.

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4. The method of claim 1 wherein the play executing step includes the steps of:

allocating variables;

reading a byte code from the clinit method that manipulates local variables of the clinit method; and

performing the manipulation of the local variables on the allocated variables.

5. The method of claim 1 wherein the play executing step includes the steps of:

obtaining a reference to a constant pool of the clinit method;

reading a byte code from the clinit method that manipulates the constant pool; and

performing the constant pool manipulation.

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6. A method in a data processing system, comprising the steps of:

receiving code to be run on a processing component to perform an operation;

play executing the code without running the code on the processing component to identify the operation if the code were run by the processing component; and

creating an instruction for the processing component to perform the operation.

7. The method of claim 6 wherein the operation initializes a data structure, and wherein the play executing step includes the step of:

play executing the code to identify the initialization of the data structure.

8. The method of claim 6 wherein the operation statically initializes an array and wherein the play executing step includes the step of:

play executing the code to identify the static initialization of the array.

9. The method of claim 6 further including the step of:

running the created instruction on the processing component to perform the operation.

10. The method of claim 6 further including the step of:

interpreting the created instruction by a virtual machine to perform the operation.

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11. The method of claim 6 wherein the operation has an effect on memory, and wherein the play executing step includes the step of:

play executing the code to identify the effect on the memory.

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12. A data processing system comprising:

a storage device containing:

a program with source code that statically initializes a data structure; and

class files, wherein one of the class files contains a clinit method that statically initializes the data structure;

a memory containing:

a compiler for compiling the program and generating the class files; and

a preloader for consolidating the class files, for play executing the clinit method to determine the static initialization the clinit method performs, and for creating an instruction to perform the static initialization; and

a processor for running the compiler and the preloader.

13. The data processing system of claim 12 wherein the preloader includes a mechanism for generating an output file containing the created instruction.

14. The data processing system of claim 13 wherein the memory further includes a virtual machine that interprets the created instruction to perform the static initialization.

15. The data processing system of claim 12, wherein the data structure is an array.

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16. The data processing system of claim 12 wherein the clinit method has byte codes that statically initialize the data structure.

17. The data processing system of claim 12 wherein the created instruction includes an entry into a constant pool.

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18. A computer-readable medium containing instructions for controlling a data processing system to perform a method, comprising the steps of:

receiving code to be run on a processing component to perform an operation;

simulating execution of the code without running the code on the processing component to identify the operation if the code were run by the processing component; and

creating an instruction for the processing component to perform the operation.

19. The computer-readable medium of claim 18 wherein the operation initializes a data structure, and wherein the simulating step includes the step of:

simulating execution of the code to identify the initialization of the data structure.

20. The computer-readable medium of claim 18 wherein the operation statically initializes an array and wherein the simulating step includes the step of:

simulating execution of the code to identify the static initialization of the array.

21. The computer-readable medium of claim 18 further including the step of:

running the created instruction on the processing component to perform the operation.

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22. The computer-readable medium of claim 18 further including the step of:

interpreting the created instruction by a virtual machine to perform the operation.

23. The computer-readable medium of claim 18 wherein the operation has an effect on memory, and wherein the simulating step includes the step of:

simulating execution of the code to identify the effect on the memory.

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